

Hints
On the Arrangement of Colours
in
Ancient Decorative Art.

With some Observations on the Theory of
Complementary Colours.

By G. J. French.

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“They did beat the Gold into thin plates, and cut it into wires, to work it in the blue, and in the purple, and in the scarlet, and in the fine linen, with cunning work.” — Exodus, xxxix. 3.

Preface.

THIS short Paper is reprinted in compliance with the request of parties who have expressed an interest in the subject of the arrangement of colours in decorative art. It would have been easy to amplify it by the introduction of arguments in favour of the particular practice it brings under notice, and by an accumulation of examples, the result of careful observation since it was first printed: But as it is intended rather to suggest matter for the consideration of the decorative manufacturer than to propound a new or to revive an old theory, I am content to reproduce it in its present humble form, adding only a few words on complementary colours, to explain what may appear to be opposed to the practice of the old decorative artists.

G. J. F.

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Hints on the Arrangement of Colours,

¶c.

ANCIENT ARRANGEMENT OF COLOURS.

I VENTURE to offer a few brief remarks upon certain coincidences in the arrangement of colours, which I have observed to obtain extensively in nature, and in ancient, mediæval, and semi-barbarous ornamentation.

It is not necessary that I should occupy attention by any lengthened attempt to prove that ancient and mediæval artisans had, by some means or other, a happy mode of combining and contrasting, with exquisite skill, the most brilliant shades of positive colours. This facility, upon whatever principle it may depend, is not

generally within the scope of the artisan of the present day, who rather trusts for his effects to the use of neutral, undecided, and delicate tints, avoiding for the most part any considerable amount of intense colour. I do not enter into the question of the propriety of this arrangement, but merely assert, what I believe will readily be admitted, that brilliant colours are less harmoniously arranged by the modern than they were by the mediæval artisan. This is particularly the case when colour¹ is used in the internal decoration of Churches, and of Church windows.¹

It is a generally received opinion also, that British manufacturers are less tasteful in the combination of colours than their Continental opponents. I call attention to this assertion that I may afterwards point out a possible reason for this presumed inferiority.

¹ Compare the new glass in Westminster Abbey, which should be a favourable specimen of Modern art, with any Ancient Ecclesiastical glass.

It might be more difficult to induce the belief that many barbarous or half civilized nations are remarkable for the harmonious intermixture of their coloured ornaments, were I not able to call as evidence to the fact one of the very best authorities in the kingdom. Professor Leslie, in his Lectures on Painting, at the Royal Academy, remarks¹ that "in the infancy of Painting, in every period of the world, a perception of, and taste for, colour has invariably preceded the discovery of chiaroscuro. We see it in the pictures of the Egyptians, and in the decorations of their mummy cases; and even the American Indians often display much taste in the choice of the colours with which their manufactures are adorned; their wampum belts, their pouches, their mocassins, the cradles of their infants, &c.

"In the paintings of the Chinese, the deco-

¹ From the Report in the *Athenaeum* for March 11th, 1848, No. 1063, p. 270.

rations of their porcelain, the patterns of their silks, and the ornaments of their furniture, we often see great refinement of taste in the selection and arrangement of colours; the most vivid tints are harmonised by contrast with the most refined and delicate, and an admirable balance is preserved between positive and negative hues. The same is true of the Persians, and other, as we consider them, semi-barbarous people; and it is very remarkable that we never see in the pictures and manufactures of these semi-barbarians those glaringly vulgar combinations of colour that so frequently occur in the manufactures and art of the most civilised nations of the present day. In the purchase of a carpet, for instance, with how much that is tasteless and vulgar the eye is wearied before it can find anything equal to the beauty of a Persian pattern; and how far more agreeable, in general, is the effect of the Chinese to the Sèvres porcelain, though the pictures on the former leave out light and shadow, and set per-

spective at defiance, while those on the latter profess to be complete works of art."

If then I be correct in my assertion, corroborated as it is in part by the high authority I have just quoted, it assuredly becomes a matter of no slight interest to discover any of the means employed by the ancient artisan to produce this very satisfactory result.

It is to what I presume to be *one* of these means that I venture to direct attention.

Some years since I had an opportunity of closely examining a number of illuminated MSS., of what I believe is allowed to be the best period of English mediæval art,—that of the first three Edwards. I was particularly struck with the uniform arrangement of certain colours, and remarked that the practice of the illuminators was,—

I.—To separate the prominent colours, red, blue, green, purple, ruby, violet, &c. from each other, by spaces or lines of *yellow*, *white*, or *black*.

II.—To paint with brilliant colours on grounds of *yellow*, (frequently gold,) *white*, or *black*; or on a ground of any other colour, to use *yellow*, *white*, or *black* only for the ornamentation.

III.—To combine two or more shades of red, or of blue, green, purple, &c. &c. without the intervention of *yellow*, *white*, or *black*.

IV.—To place *yellow*, *white*, or *black* together, or upon each other, without reference to the law which appears to have regulated the arrangement of all other colours.

Having carefully noted these laws — as for convenience I venture to call them — I was induced to inquire whether they were peculiar to illuminated books and to the particular era of mediæval art known as the English Decorated: to my surprise I found them of very general application.

I briefly notice a very few of the more prominent instances, mentioning only such as admit of being easily verified or contradicted

by reference to books, or the contents of ordinary museums.

The mural paintings and other polychromic decorations of the ancient Egyptians,¹ Assyrians,² Moors,³ &c.

The vases and pottery of the classical period in Europe.

¹ See the coloured engravings to Belzoni's *Researches in Egypt and Nubia*.

I find, from the notes of a gentleman into whose hands I was permitted to place memoranda when he was about to visit the East, and who kindly undertook to procure information on the subject on the spot, occasional departures from the rule, with this general remark — “Most of the grounds are yellow or white, but sometimes black, but this is not invariable in the parts covered with hieroglyphics. The hieroglyphics, when large, are often of the natural colours; when not so, they are mostly blue; some of the yellows approach to a brown, (the effect of time and dust.)”

I may add, from the information of another friend, that the screens in the Coptic churches of modern Egypt are frequently made from wood, dyed a bright red, ebony, and ivory, in beautiful geometrical devices.

² See Dr. Layard's *Monuments of Nineveh*, and in particular, the coloured engraving representing a restored hall.

³ See *The Alhambra*, by Owen Jones.

The mosaics of Italy and Sicily.

The illuminations, mural paintings,¹ stained glass,² and encaustic tiles of the middle ages in England.

The vestments of the clergy and nobility, before the Reformation, in which the varied colours were separated by golden orfreys, or by linings of ermine and miniver.

The embroidery of almost every country except modern England and Germany, and particularly that of China, India, Persia, and Turkey.

The woven fabrics, as shawls, silks, and carpets of the same countries.

Almost all oriental paintings, toys, porcelain, enamels, jewellery, and inlaid work.

¹ It must be remarked that towards the end of the fifteenth century, and the decadence of Gothic architecture, frequent violations of the rules occur, both in mural paintings and in glass.

² The black lines in painted glass are merely the leads used to hold together the different pieces forming the mosaic. They are frequently arranged with much artistic skill in the folds of the drapery, &c.

The implements, arms, and ornaments of many barbarous nations in Africa, America, and the islands of the Pacific. And

Heraldry, which presents perhaps the most marked example of the practice, having been less subjected to capricious changes of fashion than any other branch of ornamental art. But heraldry is also governed by a peculiar law of its own, which excludes it from the last of the rules regulating ancient colour; thus, metal on metal, being bad heraldry, precludes the use, except in very rare instances, of yellow on white, or white on yellow. In all other particulars, heraldry strictly follows the rules,¹ even to the admission of two shades of the same colour in diapering the fields of shields, a beautiful enrichment of the ancient heraldic painter, entirely neglected in the present day.

¹ The livery colours of the nobility were always so arranged; for example, the royal livery of England was during the—

This list might be greatly extended, but I have done enough if I succeed in rousing curiosity, and inducing enquiry and examination.

In every case, however, exceptions may be met with; but the extent to which these laws were acted upon, and the relative proportion of exceptions, may be well understood by an examination of three books, to which I solicit attention, not only because they are most valuable authorities for or against my argument, but also because they may easily be referred to, and thus serve to confirm or refute it, at least to the extent of mediæval art.

Plantagenets	white and red.
Lancaster.....	white and blue.
York	<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="flex-grow: 1; text-align: right;">murrey (a deep yellow)</div> <div style="font-size: 2em; margin: 0 10px;">}</div> <div style="flex-grow: 1; text-align: left;">and blue.</div> </div>
Tudor	white and green.
Stuart	yellow and red.
And after the accession of Wil- liam and Mary.....	<div style="display: flex; align-items: center; justify-content: space-between;"> <div style="flex-grow: 1; text-align: right;">orange and blue.</div> <div style="font-size: 2em; margin: 0 10px;">}</div> </div>
Hanover	scarlet and blue.

In which last, ancient practice and heraldic rules are both violated.

I.—“Specimens of the Geometrical Mosaic of the Middle Ages, by Matthew Digby Wyatt,” containing ninety coloured subjects, and representing, with undoubted accuracy, beautiful examples of this exquisite art. Of these, eighty-five are strictly in accordance with the laws I have endeavoured to explain, while five only, and that in a slight degree, vary from them.¹

II.—“Glossary of Ecclesiastical Ornament and Costume, compiled and illustrated from ancient authorities and examples, by A. Welby Pugin, Architect.” This splendid volume exhibits upwards of two hundred and thirty distinct examples, subject to the arrangement, and only eight opposed to it, five of these eight in a very trifling degree.²

III.—“Details and Ornaments from the Alhambra, by Owen Jones, Architect.” Out of sixty-five coloured subjects in this magni-

¹ Published for the Author. London, 1848.

² Henry G. Bohn. London, 1844.

ficient and well-known publication, I find two only directly opposed to the rules; a few others differ from them very slightly.¹

To show that this combination of colour was not the result of accident, but that the laws for its arrangement were *taught* as well as practised by the mediæval artists, I extract from Mr. Hendrie's translation of "Theophilus, the Priest and Monk."

On the Embellishment of a Picture in Glass.²

"There is also a certain ornamenting upon glass in sapphire, green, white, and light purple colour When you have made the first shadows in drapery of this kind, and they have become dry, cover whatever of the glass is left, with a light colour, which must not be so dark as the second shadow, nor so light as the first, but the mean between

¹ London. Published by the Author.

² Theophilus' *Arts of the Middle Ages*, translated by R. Hendrie, p. 141. Murray, London, 1847.

these, which being dry, with the reverse of the pencil make circles and branches, and upon them flowers and leaves.” That is, by removing, with the hard wooden end of the brush, portions of the second coat of colour, before it was fused to the glass, in the form of circles, branches, leaves, and flowers, the devices would be shown in a lighter shade of the ground colour, in exact accordance with the third rule. Again, “In the same manner you may make grounds of the clearest white, the figures of which grounds you ornament with sapphire, green, purple and red,” agreeing with the first part of the second rule. “Also, in grounds of blue, and green colour, and of red, you make draperies of the clearest white, than which kind none is more beautiful,” according to the second part of the same rule.

It is probable that a certain mystical importance was attached to colours, in connection with the theology of the very earliest ages. On this subject I cannot do better than quote

the valuable opinion of Lord Lindsay, as it confirms the coincidence in the use of colours among ancient nations, without, however, entering into the details of their arrangement.

“In connection with Christian symbolism, I may mention the mystical value and appropriation of colours as a very interesting subject, as yet insufficiently illustrated. More has been said on this question than (I fear) can be fairly proved, but I have little doubt that a distinct system had been defined and generally accepted previous to the confusion of tongues and the general dispersion,—at least the correspondence and agreement on this point between nations very widely apart from each other, in race and residence, is too close occasionally for explanation otherwise.”¹

The coincidence of these laws for the arrangement of colour, thus influencing the art of various and widely spread nations, uncon-

¹ *Sketches of History of Christian Art*, by Lord Lindsay: Introduction, p. xxiv.

nected as most of them were by local or by religious ties, and extending from the earliest era of art to the present time, is at least curious and interesting. I believe that a knowledge of the facts may be *useful* also to the modern decorator and manufacturer. I will now endeavour to point out their probable origin.

NATURE'S ARRANGEMENT.

One of the most truthful and original modern writers on art,¹ states, in reference to architectural *form*, "I would insist especially on the fact, of which I doubt not that further illustrations will occur to the mind of every reader, that all most lovely forms and thoughts are directly taken from natural objects; be-

¹ *The Seven Lamps of Architecture*, by John Ruskin. (London, Smith, Elder, and Co., 1849,) p. 96.

cause I would fain be allowed to assume also the converse of this, namely, that forms which are *not* taken from the natural objects *must* be ugly ;” and again, “that forms are not beautiful *because* they are copied from nature ; only it is out of the power of man to conceive beauty without her aid.”

What is here demanded with so much boldness and truth for elegance of *form*, I claim with equal confidence for harmony of colour ; it is impossible to imagine any beautiful or harmonious colouring at variance with nature, or at least with nature when expressing her lovelier attributes of harmony and peace.

If then the ancient and mediæval artisan, and semi-barbarians of every age, alike excelled in the beauty of their coloured ornamentation, it is probable that they all took nature for their copy, which, as Sir Joshua Reynolds has remarked, “is always at hand, in comparison of whose rules the best coloured pictures are but faint and feeble.” Now all the great pie-

tures of nature, when exhibited under ordinary circumstances, are painted strictly in accordance with the rules practised by the mediaeval artist. The azure firmament of day has its golden sun, its clouds of white, shaded with black, and tinted with yellow, or if tinged with red, as at sunset, usually seen in an atmosphere of pale yellow. The indigo sky of night has its silver moon, and is studded with golden stars, while the black clouds are ever fringed with silvery white. When exceptions occur, they are looked upon as portentious and awful, and even the greatest exceptions are but modifications of the rules, which nature rarely contradicts entirely.

The green meadows of spring and early summer are embroidered with flowers, among which white or yellow immensely preponderate. It is not until the strong sun of June has tinged the herbage with gold colour, that flowers of blue, red, or purple prevail. In the emerald grass we find the daisy and the

buttercup, among the yellow grain the scarlet poppy and the bright blue cornflower.

When nature paints in miniature she adheres to the same rules. Cull the flowers of the field or of the garden, and examine them individually; it will be found that when more than one distinct colour occurs in any specimen, one of these colours is certain to be white, yellow, or (though more rarely) black.¹ Or, they may be found beautifully damasked with two or more tints of one colour, like the diapering in ancient heraldry.² In animal nature the rule also holds good; birds, beasts, and fishes, reptiles, insects and shells, are generally tinted in accordance with them.

¹ It is impossible to change the colours of flowers *ad libitum*, by artificial means; yet the rose, naturally red, may be changed to any shade between red and yellow, red and white, and red and black, but it admits no shade of blue; so also the dahlia, &c. &c.

² The old Dutch painters of flowers mostly worked on a *black* ground. The value of this arrangement may be easily and pleasantly ascertained by examining natural flowers by the light of a lantern on a dark night. The exquisite beauty

But in nature, as in art, many exceptions may be met with, some of them merely monstrosities, others doubtless wisely designed, though the intention may be incomprehensible to human view. I may instance as exceptions many of the baboons, on whose ugly bodies the most brilliant and beautiful tints of red and blue are placed in juxtaposition ; and the effect of this is greatly to increase one's disgust and horror of the hideous animals.

I have before alluded to the asserted inferiority of British manufactures, in respect to the combination and contrast of colours, and I venture to claim attention to the fact, that French silks, ribbons, printed cashmeres, cottons, and especially French millinery, however delicate the tints, have their colours arranged in accordance with the laws I have stated. Now this is rarely the case with Coventry ribbons, or with Manchester silks and prints ; of nature's floral gems, when thus exhibited, can scarcely be understood without trial of the experiment.

even when the English manufacturer copies the *forms* of French patterns, he deviates from the arrangement of colour,— it may be for the sake of variety, or to conceal the appropriation, and thus the effect of the most beautiful devices is often totally destroyed.¹

I do not seek to impugn any existing theory of colour, much less to establish a new one: but I desire to engage attention to a subject of much importance to British commerce and to British art. Very extensive means of observation have enabled me to test the comprehensiveness and utility of this practice of the ancient decorators, and of the manufacturers of other countries, both civilised and barbarous, and I cannot hesitate to recommend the adoption of these rules as likely to benefit the art manufactures of England. I may be mistaken in my idea of their importance, yet I

¹ The British paper stainer for the most part works in accordance with the old laws, though I apprehend that this may be accounted for by the practice of copying foreign productions, rather than by any recognition of their value.

sometimes imagine that, simple as they are, they really embrasee many of the requirements of art. Combinations of yellow, white, and black produce an innumerable variety of tints in undecided greens¹ and neutral greys—the most universally diffused of all colours, and these may be warmed or cooled to any degree by the addition of the primitives, red or blue.

I take leave to reiterate the remark, that I do not claim the beauty of ancient and mediæval polyehromic effects, or of the best specimens of modern manufactures, to be produced *only* by the peculiar arrangement of colours which I have endeavoured to explain; but I venture to believe that it is one of the means successfully employed for the purpose, and therefore I do not hesitate to advocate its use by the English artisan.²

¹ The value of the neutral greens (if I may so term the tints of black and yellow, without the intermixture of red or blue) was well understood by the old artists in glass, and is agreeably exemplified in many an ancient church window.

² In playing cards, the king, queen, and knave are coloured

COMPLEMENTARY COLOURS.

Since the philosophical discovery of the relation in which certain colours stand to each other, by their *compensating* effects, it appears to have been assumed by many that such colours as are known to be complementary to each other must necessarily harmonise when brought together. Thus we find that combinations of red and green have become fashionable in dress, and very frequently occur in paper hangings, glass staining, bookbinding, and other coloured decorations. This appears to be opposed to the principles by which the successful artist has been shown to be guided; it may therefore be worth while to enter into a very brief examination of the subject.

in accordance with the practice recommended. No attempt to introduce what is called a more artistic style of colouring has ever succeeded; the quaint dress and barbarous painting of the middle ages still retain their popularity — a fact full of suggestions to the decorative painter.

To be understood by those who have not studied the theory of complementary colours, I must explain, that if we look intently for some time upon any very brightly coloured small object, and then remove that object, its place will appear to be occupied by a figure of similar size and form, but of some different colour. If, for instance, a red wafer placed on a sheet of white paper be steadily gazed upon for a considerable time, the eye becomes fatigued and pained. On the removal of the wafer, nature supplies its place with a similar spot, which to the injured eye appears green; and as this serves to restore the equilibrium which had been disturbed by the excess of red, green is called the accidental, complimentary, or compensating colour to red.

Other colours act upon the eye in a similar manner, and it may be remarked that the complementary colours are always of an opposite degree of warmth or coldness. The list of

these colours, according to Sir David Brewster,¹ is —

Red	complementary to	green (blueish.)
Orange	"	blue.
Yellow	"	indigo.
Green	"	reddest violet.
Blue	"	orange (red.)
Indigo	"	orange (yellow)
Black	"	white.
White	"	black.

Now some of these combinations, and in particular the first pair, are obviously at variance with the practice of the old decorators; and the question arises, whether these combinations be harmonious, and if so, why they were rejected.

Doubtless a well arranged and carefully balanced decoration in green and red might be made to produce a pleasing effect; but it could scarcely be called harmonious, as it

¹ Treatise on Optics, in Lardner's *Cabinet Cyclopædia*. M. Chevreal gives a nearly corresponding list in the volume of the Cavendish Society for 1848.

would result from the combination of opposing and antagonistic colours, so arranged in quantity and force as to neutralise each other.

This must ever be a difficult task, because the slightest excess of either must disturb the necessary balance, and the repose essential to true harmony would be destroyed. Such a combination, therefore, should be rejected by the artist employed to decorate a room or a church, as well as by the manufacturer, calico printer, bookbinder, paperhanger, &c., for in such works anything piquant or stimulative to the eye should be carefully avoided. But the high art painter of imaginative pictures, who desires to act upon the mind and feelings through the eye, should not be restricted by such a rule. His part is to seize the best means of exciting lively emotions; and this has been done, to the wonder of the artistic world, by so simple an expedient as the scarlet comb of a barn yard fowl, or by the introduc-

tion of an old soldier or a woman in a red cloak in a green landscape.

This method of giving apparent motion to figures in a painting, or vitality to the objects in a landscape, is a legitimate effort of the painter's art. The spectator's eye, attracted by the brilliant red, is for a moment riveted upon it, but soon seeks relief in the compensating colours of other portions of the painting, and thus wandering from point to point, it conveys to the mind the *idea of motion*, the very feeling which in such a case it is desirable to create.

Very different is the feeling which the house decorator, the weaver, the painter, and especially the painter of church windows, should endeavour to awaken. Their efforts may be directed to the production of grand and beautiful, nay gorgeous combinations of colour, but always so arranged as to induce the idea of stillness and perfectly harmonious *repose*.

Yet how often is the eye offended by modern

glass paintings of saints and apostles in heavy draperies of crimson and blue, or of our blessed Lord robed in vivid tints of scarlet and emerald? Such windows at first excite the wonder of the casual spectator, who admires the overwhelming brilliancy of colour produced by powerful but inharmonious contrasts, which never fail to fatigue the eye and the mind after repeated and lengthened observation.

But every visit, however lengthened, only increases our perception of the wondrous beauties of the stained glass of the ancient artists, upon which we delight to look with feelings of calm admiration, despite the accumulated dirt of ages, their distorted and imperfect drawing, and, worst of all, their injudicious repairs. It is not, as many suppose, in any superiority of colours or material in the ancient windows that this advantage consists. Chemistry supplies the modern artist with all the arts of the old masters, and has added to them numberless new resources, appliances,

and facilities of execution, of which he was totally ignorant; but the strength of the old decorator in great measure arose from his close attention to the laws of nature in the combination of colours. In the most trifling and minute details he followed the perfect example of the great Creator of the universe, Who, when He had completed the mighty work, pronounced it to be **VERY GOOD.**